# Streptococcus: Group B Strep (Agalactiae) in Infant

Note: main types of Group B strep. Diseases

1. early onset neonatal disease: pneumonia and bacteremia
2. late onset disease: meningitis, some bacteremia
3. maternal disease: bacteremia (especially with C-sections), endometriosis, UTI
4. Disease in nonpregnant: skin / soft tissue infection, bacteremia without focus, pnemonia, septic arthritis / endocarditis / meningitis.
5. Host risk factors- diabetes II, age 65+, liver disease, immune compromise.

Presentation:

1. 3 wk old- 24 hr history of fever, poor feeding, irritability, seizure. Was born prematurely, vaginally.
2. nuchal rigidity
3. Diagnostic: CSF analysis, blood culture, gram stain, PCR, detect capsular Ag
4. type III meningitis

S. Agalactiae:

1. Gram positive cocci in chains
2. has group B Ag
3. are encapsulated by one of 9 polysaccharides, type III is in newborns
4. shows beta hemolysis, catalase negative, bacitracin resistant

Epidemiology

1. GBS infections are leading bacterial cause of death / disease among newborns. 40% of pregnant women carry it in genital tract.
2. material risks associate with disease in newborn:
   1. premature delivery
   2. premature rupture of membranes
   3. long period between membrane rupture and delivery

Pathogenesis:

1. invasive pathogen causing sepsis, pneumonia, meningitis in newborns
2. pathogenesis based on maternal colonization
3. the type III polysaccharide is major virulence factor- antiphagocytic

Treatment / Prevention

1. Penicillin G and ampicillin are best
2. no vaccine yet